

IN THE CLAIMS

CLAIM 1 (Original) An apparatus for electrically testing a work piece having a plurality of electrically conductive contact locations thereon comprising:

a substrate having a first surface and a second surface;

A3 a plurality of first electrical contact locations on said first side;

a plurality of probe tips disposed on said first contact locations;

each of said probe tips having an elongated electrically conductive member projecting from an enlarged base, said base being disposed on said contact locations;

1 means for moving said substrate towards said work piece so that said plurality of probe tips are pressed into contact with said plurality of contact locations on said work piece.

CLAIM 2 (Original) An apparatus according to claim 1 wherein said probe tip is formed from a material selected from the group consisting of Cu, Au, Al, Pd and Pt, and their alloys.

CLAIM 3 (Original) An apparatus according to claim 2 wherein said probe tip has at least one coating selected from the group consisting of Pt, Ir, Rh, Ru, Pd, Cr, Ti, TiN, Zr, ZrN and Co.

CLAIM 4 (Currently Amended) An apparatus according to claim 2, wherein said further comprises a protuberance has comprising a first coating selected from the group consisting of Cr, Ti, TiN, Ni, Zr, ZrN or Co and a second coating over said first coating selected from the group consisting of Pt, Ir, Rh, Ru and Pd.

CLAIM 5 (Original) An apparatus according to claim 1, wherein said substrate further includes a decoupling capacitor.

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CLAIM 6 (Original) An apparatus according to claim 1, wherein said elongated member has a flattened end.

CLAIM 7 (Original) An apparatus according to claim 1 wherein said second surface has a plurality of second electrical contact locations thereon.

CLAIM 8 (Currently Amended) An apparatus according to claim [[1,]] 7 wherein said second contact locations have an elongated electrical conductor attached thereto.

CLAIM 9 (Original) An apparatus according to claim 1 wherein said substrate has electrical conductor patterns extending from said first surface to said second surface.

CLAIM 10 (Original) An apparatus according to claim 1, further including a sheet of material having a plurality of openings, said opening being positioned to align with said plurality of probe tips, said sheet is disposed over said plurality of probe tips, said elongated electrically conductive members being disposed in said opening.

CLAIM 11 (Original) An apparatus according to claim 10 wherein said elongated electrically conductive member has a first end disposed in contact with said enlarged base and a second end disposed in contact with an enlarged tip.

CLAIM 12 (Original) An apparatus according to claim 10 wherein said sheet is disposed between said enlarged base and said enlarged tip.

CLAIM 13 (Original) An apparatus according to claim 10, further including a layer of material disposed on said sheet, said layer having openings aligned with said probe tips.

CLAIM 14 (Original) An apparatus according to claim 13, wherein openings in said layer are larger than said probe tip.

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CLAIM 15 (Original) An apparatus according to claim 14, wherein said contact locations on said work piece are ball-shaped and wherein said openings in said layer are adapted to receive said contact locations on said work piece having said ball shape.

CLAIMS 16-43 (Canceled).

CLAIM 44 (New) A structure for electrically contacting an electronic device having a plurality of electrically conductive contact locations thereon comprising:

a substrate having a first surface and a second surface;

a plurality of first electrical contact locations on said first side;

a plurality of tips disposed on said first contact locations;

each of said tips having an elongated electrically conductive member projecting from an enlarged base, said base being disposed on said contact locations.

CLAIM 45 (New) A structure according to claim 44, wherein said tip is formed from a material selected from the group consisting of Cu, Au, Al, Pd and Pt, and their alloys.

CLAIM 46 (New) A structure according to claim 45, wherein said tip has at least one coating selected from the group consisting of Pt, Ir, Rh, Ru, Pd, Cr, Ti, TiN, Zr, ZrN and Co.

CLAIM 47 (New) A structure according to claim 45, further comprises a protuberance comprising a first coating selected from the group consisting of Cr, Ti, TiN, Ni, Zr, ZrN or Co and a second coating over said first coating selected from the group consisting of Pt, Ir, Rh, Ru and Pd.

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CLAIM 48 (New) A structure according to claim 44, wherein said substrate further includes a decoupling capacitor.

CLAIM 49 (New) A structure according to claim 44, wherein said elongated member has a flattened end.

CLAIM 50 (New) A structure according to claim 44, wherein said second surface has a plurality of second electrical contact locations thereon.

CLAIM 51 (New) A structure according to claim 50, wherein said second contact locations have an elongated electrical conductor attached thereto.

CLAIM 52 (New) A structure according to claim 44, wherein said substrate has electrical conductor patterns extending from said first surface to said second surface.

CLAIM 53 (New) A structure according to claim 44, further including a sheet of material having a plurality of openings, said opening being positioned to align with said plurality of tips, said sheet is disposed over said plurality of tips, said elongated electrically conductive members being disposed in said opening.

CLAIM 54 (New) A structure according to claim 53, wherein said elongated electrically conductive member has a first end disposed in contact with said enlarged base and a second end disposed in contact with an enlarged tip.

CLAIM 55 (New) A structure according to claim 53, wherein said sheet is disposed between said enlarged base and said enlarged tip.

CLAIM 56 (New) A structure according to claim 53, further including a layer of material disposed on said sheet, said layer having openings aligned with said tips.

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CLAIM 57 (New) A structure according to claim 56, wherein openings in said layer are larger than said tip.

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CLAIM 58 (New) A structure according to claim 57, wherein said contact locations on said work piece are ball-shaped and wherein said openings in said layer are adapted to receive said contact location on said work piece having said ball shape.
